

**Before the
Federal Communications Commission
Washington, D.C.**

In the Matter of)

Revision of the Commission's Rules)
To Ensure Compatibility with)
Enhanced 911 Emergency)
Calling Systems (TTY))

CC Docket No. 94-102

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**COMMENTS OF
SBC WIRELESS INC.**

Now comes SBC Wireless Inc. and files these Comments in response to the Wireless Bureau's request for information regarding the implementation deadline for TTY access to digital wireless systems on 911 calls.¹ The Public Notice requests comment on the proposed deadline of December 31, 2001 and information on consumer, technical and other issues.

SBC Wireless considers TTY access to wireless E911 on digital systems a serious issue and is committed to resolving the issue. SBC Wireless has participated in the TTY E911 Forum and has continued to work with network and handset vendors for solutions. Network equipment and handset vendors hold a key because without the technology, carriers cannot provide such access. Based on the most recent responses from its network equipment and handset vendors, a timeline has been developed by SBC Wireless to achieve compliance with the December 31, 2001 deadline. SBC Wireless notes that based on the current timeline committed to by Ericsson for GSM the December 31, 2001 date will be tight to meet. The time frames for GSM infrastructure upgrades leave no

¹ Public Notice, "Wireless telecommunications Bureau Seeks Comment on New Implementation Deadline for TTY Access to Digital Wireless Systems for 911 Calls", CC Docket 94-102 (Released May 17, 2000).

room for any unexpected issues or problems. SBC Wireless will continue to work with Ericsson looking for ways to accelerate without jeopardizing the quality of the end solution. SBC Wireless has also encouraged Ericsson to continue its investigation and development to make the “smart cable” available as an interim solution. SBC Wireless recognizes that while the “smart cable” is not an ideal solution, it would provide backward compatibility with existing handsets and would help Ericsson comply with its Section 255 requirements.

I. TIMELINE FOR TTY COMPLIANCE

There are three basic components that must come together for achieving TTY E911 compliance for digital wireless systems:

- Network infrastructure compatibility—SBC Wireless uses Lucent TDMA and Ericsson GSM systems
- Handset Availability
- Implementation for commercial availability

In preparing these comments SBC Wireless once again queried its primary vendors concerning their ability to meet the December 31, 2001 implementation deadline and requested written commitments.

In regards to network infrastructure, Lucent has committed to having the TDMA network solution in place by June 1, 2001. At this time however Ericsson could not commit to a date sooner than mid-October 2001 for software roll out availability for GSM. SBC Wireless uses GSM in its PCS markets operated by Pacific Bell Wireless.

The mere availability of the software does not make a system readily compliant, especially with the Ericsson GSM system. The implementation of the software is a major upgrade to the system and presents a significant task in terms of possibly changing out hardware, integrating existing features and assuring consistent reliable service.

Ericsson's written response indicates that the GSM upgrade will require the change out of millions of dollars of network infrastructure equipment, which of course requires the availability of such equipment from the vendor. Because the Ericsson provided GSM solution requires an infrastructure upgrade, it is essential that the software and equipment is available to all Ericsson GSM operators, thus availability is important. Such availability is essential for compatibility of TTY customers when roaming. The change out and integration of the equipment into the network requires a very methodical process to assure the continued functionality of the network. Attempting to accelerate equipment changeouts can jeopardize the integrity of the entire network. Likewise, a major software network upgrade and change-out of equipment requires not only the testing of the new capabilities but coordination and testing with all other components of the network to assure the continued availability of reliable service. Assuming that a software upgrade is functioning well and the vendor is cooperative, SBC Wireless' experience has been that 4 months is normally needed from receipt of a major software release to complete deployment, integration and testing throughout its networks. The two and one half-month period between release and the compliance deadline currently committed to by Ericsson will require an accelerated schedule and leaves no leeway for error or unexpected problems. The manufacturers meeting their commitment dates is crucial to the operators meeting the compliance date, but even more so for the Ericsson GSM technology.

In regards to handset availability the handset manufacturers indicate that compliance will depend largely on the availability of information and opportunity to test on the network being provided by the infrastructure manufacturers. Handset

manufacturers believe that if there is general availability of the needed information and ability to begin testing by December 2000 they will be able to meet the December 31, 2001 deadline. Meeting the deadline for GSM is also contingent upon the standards process being completed by September 2000.

Provided commitments are met, handset commercial availability (i.e. solutions implemented in the network and handsets available) should be met for TDMA and is likely for GSM. Operators basically need a four-month minimum for network deployment and testing. As noted above, installation of the software is not a matter of simply loading the software rather integration work with other features and programs is required, in addition to, in some cases, changing out hardware and other network infrastructure and coordinating and testing the changes. Deployment, integration and testing typically require approximately 4 months to complete. Thus, provided the software is generally available by September 2001 the December 31, 2001 deadline should be met.

Thus, based on the response of its vendors, SBC Wireless believes it will meet the deadline for TDMA, provided the vendors meet their commitments. As noted, the meeting of the deadline for Ericsson GSM will be tight but SBC Wireless commits to working vigilantly with Ericsson for compliance. Based on Ericsson's mid-October 2001 estimated availability date for the software upgrade and an aggressive deployment, integration and testing period, the December 31, 2001 date should be achievable for SBC Wireless, provided the testing is successful. If there are any errors in regression testing, then compliance will require the development and deployment of a fix and necessary re-testing.

II. Monitoring

The Wireless Bureau notes that it is imperative that providers of wireless service work diligently to make their systems compatible with TTY devices and seek comment on whether additional monitoring requirements should be adopted. As noted above, the meeting of the compliance date is not totally within the hands of the carriers—the carriers cannot provide accessibility without the technology. Requiring all digital carriers to file an implementation plan would be a waste of carrier and Commission resources. Such reports would be repetitive in that the same information would be reported by each carrier, depending on the technology and vendor used. The Commission does not need each carrier who utilizes Lucent TDMA technology to give it a report on the status of Lucent TDMA technology. Likewise, the Commission does not need separate reports by each carrier using Nokia handsets regarding the status of Nokia's efforts. SBC Wireless believes that given the Bureau's interest in monitoring, industry reports by the responsible party based on functional milestones should be sufficient. Based on the timetable developed based on the vendors commitments SBC Wireless would suggest reports being required from the appropriate responsible parties as indicated:

1. 9/30/00--Status of GSM Standards Setting—Report by TTY Forum
2. 12/31/00 Report on Network Infrastructure Software Development Work—filed by Infrastructure Vendors
3. 1/31/01—Report on Handset Development and Testing Plans—Handset Manufacturers
4. 4/15/01—Midpoint Report (beta testing, lab testing) filed by Network infrastructure Manufacturers; Report on prototypes, consumer testing results by filed by Handset Manufacturers
5. 7/31/01-Report on Software Availability to Operators filed by Infrastructure Vendors; Report on Beta Acceptance Units filed by Handset Manufacturers

6. 9/15/01—Report on full acceptance test units being available to operators filed by Handset Manufacturers
7. 12/31/01—last date for reporting compliance to the Commission, filed by Operators

SBC Wireless would envision any the above reports being simple and basically informing the Bureau that everything is on track, and if not on track then a detailed description of the problem, anticipated resolution date and whether the delay may affect the ultimate compliance date.

III. Enforcement

As the Public Notice indicates although Section 20.18(c) imposes public safety obligations on carriers, carriers cannot meet those obligations if the handset and network infrastructure manufacturers don't provide the necessary equipment. The Public Notice also notes that the Communications Act requires manufacturers to ensure that equipment is designed, developed and fabricated to be accessible to and useable by individuals with disabilities, if readily achievable. The Wireless Bureau seeks comment as to whether and how the Commission might use its equipment authorization process to enforce compliance with 20.18©.

SBC Wireless believes that failure to comply with Section 255 is a legitimate rationale for the Commission withholding equipment authorization from manufacturers when public safety is involved. From a sense of fairness, it seems that failure to provide carriers with the ability to comply with the public safety obligations of Section 20.18© would be a reasonable use of such authority to the extent the Commission deems appropriate. As the Bureau notes Section 20.18© is directed at carriers however carriers cannot control their destiny in meeting such requirements because of the reliance on the manufacturers. Carriers are reminded however in the

Public Notice that “the Commission will consider enforcement action, including forfeitures” if the obligations are not met. Given the strong reminder to carriers it does not seem unreasonable for vendors also to understand that failure to meet their requirements under Section 255 may also have detrimental consequences, depending on the nature of the action.

SBC Wireless also notes that requiring the equipment manufacturers to meet the December 31, 2001 date for compliance does little good because the carriers have to have time to deploy, integrate and test the technology. Thus, the Wireless Bureau should set milestones for the manufacturers as to when critical work needs to be completed, using the dates set forth above. SBC Wireless also notes again that regardless of what action the Wireless Bureau may take regarding enforcement against manufacturers, the time for deploying and integrating the solution into the wireless systems is likely to take 4 months. Thus if an infrastructure manufacturers software availability date slips beyond September 1, 2001, the corresponding operators’ compliance dates should also slip to assure the 4 month period. As noted however, the Ericsson software upgrade will not be release until October 15, 2001. As previously noted, SBC Wireless at this time believes that with an aggressive deployment, integration and testing schedule the December 31, 2001 date is achievable but again, the schedule will be tight with no room for unexpected contingencies.

IV. Consumer Impacts

SBC Wireless shares the Commission’s goal that digital wireless systems should be compatible without causing potential adverse impacts to consumers. SBC Wireless is concerned about the ability of customers to roam with digital capabilities

because such will be dependent upon the technology in the visited market. Some solutions may stretch smaller carriers in terms of resources given the level of replacement of network infrastructure in addition to software deployment, integration and testing. Thus, the ability of TTY customers to roam will be impacted by whether the visited carrier is compliant.

IV. Interim Solutions

The Public Notice seeks comment on Ericsson's "smart cable" solution for GSM TTY compatibility. Faced with the prospect of not having direct access, the "smart cable" can provide backward compatibility with products introduced after the Section 255 rules were released. Thus, if a handset manufacturer is not going to meet the September 1, 2001 milestone needed by the operators to assure deployment and availability by the December 31, 2001 deadline, the "smart cable" interim solution should be made readily available. It must be remembered however that successful deployment of the "smart cable" is dependent on installation of network infrastructure upgrades, otherwise the "smart cable" will not function. Thus, the "interim solution" still requires the network infrastructure and software deployment.

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